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BASEOPS DEFAULT PROFILES FOR TRANSIENT MILITARY AIRCRAFT

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FOR THE COMMANDER

JAMES W. BRINKLEY
Director
Biodynamics and Bioengineering Division
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This report describes default Power Setting/Airspeed/Altitude vs. Distance Profiles for transient Military Aircraft takeoff and landings. The data catalogued here are also accessible directly from the USAF BASEOPS program via the Load command. BASEOPS is a computerized operations input program for Airbase Noise analyses done under the Air Force Air Installation Compatible Use Zone (AICUZ) program. These profiles were adapted from the database previously developed for use at the Air Force Engineering Services Center (AFESC). Modifications were made to accommodate improved technical information on the flight performance and nominal thrust management for several military aircraft types. Due to the variability in operational parameters at different airbases for the same type aircraft, these data serve primarily as a guideline for input of transient aircraft profiles, which are not usually known to the airbase noise planner.

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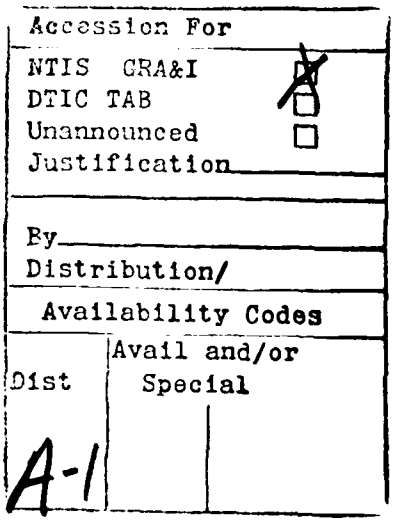
PREFACE

The author wishes to recognize Ms Dot Miller and Ms Linda Merritt of the Air Force Engineering Services Center for the initial development of many default profiles, Mr Tony Policastro of Argonne National Laboratories and Mr Nick Miller of Harris, Miller, Miller and Hanson Inc. for submission of additional profiles, Mr Jerry Speakman for his technical advice, several operational pilots for valuable flight information, and Ms Jackie Brennaman and Ms Bea Heflin for final preparation of the report.



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INTRODUCTION

The following database is provided as a convenience for the typical BASEOPS/NOISEMAP user (ref. 1&2). To access the default profiles from BASEOPS, the user must define a profile with the appropriate transient aircraft name on an arrival or departure type flight track, then type "L", for Load, in the first column of the Flight Profile Data menu.

Unlike most commercial aircraft, military aircraft are much more variable in how they are flown. Cargo aircraft may be empty or fully loaded, fighter aircraft may or may not use afterburner power on takeoff, and almost any aircraft can use some kind of noise-abatement profile to reduce noise at sensitive ground locations. These factors make it very difficult to derive an engine power/climb performance profile which is broadly applicable. However, airbase planners need to have some baseline profile for all the active military aircraft readily available since any one aircraft type can be a transient aircraft at their installation.

Airbase planners should note that any aircraft operation which contributes significantly to the DNL contour at noise sensitive locations must be modelled accurately. As such, these default performance profiles should not be used in that situation.

DISCUSSION

A military aircraft transient performance profile database originated through years of experience at the Air Force Engineering Services Center. This database included information on several aircraft which are no longer in service, or will soon be out of service. Thus some profiles for aircraft which are not included in this report may be accessible within BASEOPS. The F-101 and C-118 are examples. Others, such as the YC-14, were never included in the profile database, even though there are measured noise curves in the NOISEFILE database used by NOISEMAP. The AV-8A&B are also not included in the profile database due to their Vertical Takeoff Or Landing capability. The vectored thrust angle introduces a significant new variable which must be modelled to suit each specific case.

To compile a complete transient performance profile database, including all the aircraft in the Air Force inventory, it was necessary to convert some commercial aircraft profiles. In those cases, the appropriate Federal Aviation Administration Integrated Noise Model (FAA, INM) noise curves were adopted. Often the INM profiles were edited to remove superfluous detail and extended to the BASEOPS minimum of 200,000 ft track length. Many INM profiles had more than the 10 segments maximum allowed in BASEOPS, so points which were in nearly linear climb profiles, without power setting changes, were removed. The INM requires a data point shortly before and after power setting changes; the former may be removed without loss of accuracy in BASEOPS. For more information on civil aircraft default profiles, see ref. 3.

There are a few aircraft which were exceptions to this pattern. In particular, the C-137 (which will soon be phased out) uses commercial engine noise curves from the INM and a performance profile which was adopted from the C-18. The noise curves used for the C-137 are very similar to those for the C-18 or C-135B because they have the same engine but use different designations for it. The only differences arise due to minor technical differences between FAR part 36 data collection procedures and AF NOISEFILE data collection procedures. Also, the KC-10 and C-21 use NOISEFILE noise curve data collected by AAMRL/BBE; but the performance profiles were adapted from commercial aircraft data, since none were available from military sources.

Many takeoff profiles were modified to include a change to the cruise power setting at a point where this would be the typical operating condition. Also, the standard three degree glide slope landings were modified in many cases to include a change

from cruise to approach power setting at a point near the runway.

The aircraft names which appear in this report are identical to those used in BASEOPS. A few of the model designations listed are no longer in service (E-3A, B-57E). The model of each aircraft which was actually measured appears in these cases, but usually other models have the same engines. For aircraft with different model designations listed, there have been engines installed which have significantly different noise curves. The model designation may not always change if the aircraft has different engines installed, as is the case for the F-14, F-15, and F-16 aircraft with newer engines.

It is always the BASEOPS user's responsibility to be certain that the profile and aircraft model (thus the engine type and noise curve) used accurately represent the actual aircraft operation being modelled. These default profiles are to be used primarily when the user has no other source of good information on how the transient aircraft arrives and departs his facility.

Questions, changes, or requests regarding these default performance profiles for transient military aircraft operations should be referred to (513) 255-3664 or by writing to AAMRL/BBE, Wright-Patterson AFB OH 45433-6573.

APPENDIX A

Flight Profiles for a Transient A-3 (Skywarrior)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	99.3 % RPM	0
03	1200	0	99.3 % RPM	105
03	9000	400	99.3 % RPM	190
03	11000	700	93 % RPM	250
03	19000	1400	93 % RPM	250
03	29000	2100	93 % RPM	250
03	37000	3000	93 % RPM	250
03	200000	3000	93 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	86.7 % RPM	135
05	30400	1643	86.7 % RPM	135
05	200000	10532	86.7 % RPM	200

Flight Profiles for a Transient A-4 (Skyhawk)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	98 % RPM	0
03	4000	0	98 % RPM	140
03	11100	700	98 % RPM	195
03	18000	1750	90.7 % RPM	250
03	65000	8000	90.7 % RPM	250
03	200000	15000	90.7 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	120
05	30400	1643	82 % RPM	120
05	200000	10532	84 % RPM	300

Flight Profiles for a Transient A-6 (Intruder)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	2000	0	100 % RPM	150
03	29300	2500	100 % RPM	250
03	100000	[illegible]00	100 % RPM	250
03	200000	10900	100 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	89.7 % RPM	125
05	30400	1643	89.7 % RPM	125
05	200000	10532	90 % RPM	420

Flight Profiles for a Transient A-7 (Corsair 2)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	3000	0	100 % RPM	145
03	11100	600	100 % RPM	200
03	20000	2200	96 % RPM	350
03	53000	8000	96 % RPM	350
03	200000	15000	96 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	135
05	30400	1643	82 % RPM	145
04	200000	10532	86 % RPM	320

Flight Profiles for a Transient A-10A (Thunderbolt 2)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
11	0	0	6700 NF	0
11	4000	0	6700 NF	125
11	10100	500	6700 NF	200
12	18000	2000	6200 NF	200
12	67720	9600	6200 NF	250
12	200000	15000	6200 NF	300

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	5300 NF	125
05	30400	1632	5300 NF	125
12	200000	10532	5800 NF	300

Flight Profiles for a Transient A-37 (Dragonfly)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	2000	0	100 % RPM	125
03	12000	1000	100 % RPM	230
03	50000	8000	95 % RPM	275
03	200000	8000	95 % RPM	275

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	87.9 % RPM	100
05	36000	1937	87.9 % RPM	100
05	48000	2566	87.9 % RPM	130
05	200000	10532	87.9 % RPM	200

Flight Profiles for a Transient B-1

The loudness of this aircraft makes it an important contributor to the DNL even if it is only a 1/mo transient.

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	97.5 % RPM	0
01	5100	0	97.5 % RPM	160
01	7200	100	97.5 % RPM	175
14	13500	1200	98.5 % RPM	200
14	213500	13371	98.5 % RPM	270

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	90 % RPM	165
05	30400	1643	90 % RPM	165
04	200000	10532	90 % RPM	270

Flight Profiles for a Transient B-52B&D (Stratofortress)
The loudness of this aircraft makes it an important contributor to the DNL even if it is only a 1/mo transient.

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
02	0	0	94 % RPM	0
02	8000	0	94 % RPM	150
03	17000	1000	96.9 % RPM	160
03	48600	2500	96.9 % RPM	200
03	51600	2542	96.9 % RPM	260
03	84302	3000	96.9 % RPM	260
03	234700	8000	96.9 % RPM	260

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	87 % RPM	140
05	8500	495	87 % RPM	140
05	16300	904	90 % RPM	150
04	200000	10532	85 % RPM	250

Flight Profiles for a Transient B-52G (Stratofortress)
The loudness of this aircraft makes it an important contributor to the DNL even if it is only a 1/mo transient.

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
02	0	0	2.77 EPR	0
02	8000	0	2.77 EPR	150
02	12000	500	2.77 EPR	160
03	17000	1000	2.5 EPR	170
03	30000	2200	2.5 EPR	180
03	70000	4200	2.3 EPR	280
03	90000	28000	1.48 EPR	310
03	200000	30000	1.48 EPR	310

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	87 % RPM	140
05	8500	495	87 % RPM	140
05	16300	904	90 % RPM	150
04	200000	10532	85 % RPM	250

Flight Profiles for a Transient B-52H (Stratofortress)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	1.63 EPR	0
03	6000	0	1.63 EPR	140
03	16000	2000	1.63 EPR	220
03	42000	2000	1.63 EPR	300
03	60000	6000	1.63 EPR	350
03	200000	10000	1.63 EPR	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	1.21 EPR	140
05	30400	1643	1.21 EPR	140
04	200000	10532	1.21 EPR	250

Flight Profiles for a Transient B-57E

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	5000	0	100 % RPM	200
03	12000	200	100 % RPM	200
03	65000	6200	100 % RPM	200
03	200000	20000	100 % RPM	200

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	150
05	200000	10532	82 % RPM	150

Flight Profiles for a Transient FB-111

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	100 % RPM	0
01	4500	0	100 % RPM	170
03	18000	800	100 % RPM	350
03	63000	10000	92 % RPM	350
03	200000	15000	92 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	88 % RPM	145
05	48000	2566	88 % RPM	145
05	60000	3194	92 % RPM	165
05	200000	10532	87 % RPM	270

Flight Profiles for a Transient C-5A (Galaxy)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	5.05 EPR	0
03	6200	0	5.05 EPR	130
03	11100	420	5.05 EPR	160
03	18250	1000	4.92 EPR	200
03	29100	1150	4.92 EPR	250
03	69983	6000	4.92 EPR	250
03	113000	10000	4.92 EPR	300
03	200000	12000	4.92 EPR	300

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	3.0 EPR	145
05	30400	1643	3.0 EPR	145
05	200000	10532	2.5 EPR	260

Flight Profiles for a Transient C-7 (Caribou)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	50 IN HG	0
03	1500	0	50 IN HG	90
03	7000	700	50 IN HG	90
03	10000	940	50 IN HG	120
06	12000	1100	35 IN HG	120
06	70000	6000	35 IN HG	150
06	200000	6000	35 IN HG	150

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	27 IN HG	90
05	60000	3194	27 IN HG	90
05	200000	10532	27 IN HG	110

Flight Profiles for a Transient C-9 (Nightingale)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	2 EPR	0
03	5000	0	2 EPR	150
03	11100	470	2 EPR	170
06	47000	4000	1.7 EPR	300
06	87000	8000	1.7 EPR	350
06	200000	15000	1.7 EPR	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	1.35 EPR	200
05	30400	1643	1.35 EPR	200
05	200000	10532	1.7 EPR	300

Flight Profiles for a Transient KC-10 (Extender)
Used DC-10-30 profile by converting to %N1 via:
111% = 52500 lbs. thr. MAX PWR
79% = 9966 lbs. thr. APP PWR

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
14	0	0	103.5 % N1	0
14	4696	0	103.5 % N1	161
14	10046	1000	103.5 % N1	163
14	11046	1157	97.3 % N1	163
14	15058	1368	96.5 % N1	212
14	31233	3151	95.3 % N1	261
14	46166	5000	96.9 % N1	269
14	92789	10000	96.9 % N1	291
14	200000	21498	96.9 % N1	291

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	79 % N1	153
05	56235	3000	79 % N1	153
05	75313	4000	79 % N1	250
05	200000	10580	79 % N1	250

Flight Profiles for a Transient C-12 (Huron)
Used Beech Super King Air 200, INM73

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	2662	0	100 % RPM	115
03	10000	644	100 % RPM	250
03	100000	8547	90 % RPM	250
03	200000	10000	90 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	150
05	6000	300	30 % RPM	150
05	30000	2000	30 % RPM	200
05	60000	3000	50 % RPM	250
05	200000	10000	50 % RPM	250

Flight Profiles for a Transient C-17
Estimated data

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	30000 LBS	0
03	2500	0	30000 LBS	120
04	13400	1000	30000 LBS	200
04	31400	3000	30000 LBS	200
04	59674	6000	30000 LBS	200
04	200000	15000	20000 LBS	200

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	14000 LBS	100
05	12000	1000	18000 LBS	100
05	17000	1500	16000 LBS	162
05	200000	10532	20000 LBS	250

Flight Profiles for a Transient C-18 (ARIA)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	1.8 EPR	0
03	4000	0	1.8 EPR	120
03	11000	400	1.8 EPR	140
03	13400	600	1.8 EPR	170
03	17300	2000	1.8 EPR	170
04	22000	2200	1.4 EPR	250
04	200000	18000	1.4 EPR	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	1.4 EPR	130
05	38000	2000	1.4 EPR	130
05	200000	10532	1.2 EPR	250

Flight Profiles for a Transient C-20
Used Gulfstream 3, INM 37 data

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	9740 LBS	0
03	4210	0	9740 LBS	149
03	9341	1000	9740 LBS	149
03	11439	1257	9740 LBS	159
04	12439	1415	8766 LBS	210
04	49641	5580	8766 LBS	250
04	200000	22709	8766 LBS	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	3800 LBS	115
05	60050	3200	3800 LBS	115
05	113471	6000	3800 LBS	250
05	200000	10580	6200 LBS	250

Flight Profiles for a Transient C-21
Used Learjet 35 by converting to %RPM via:
96% = 2630 lbs. thr.
70.4% = 440 lbs. thr.

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	96 % RPM	0
03	4115	0	96 % RPM	161
03	9225	1000	96 % RPM	161
03	12606	1369	93 % RPM	177
03	21737	2000	93 % RPM	230
03	28481	3087	91 % RPM	233
03	33591	3530	91 % RPM	250
03	200000	22455	91 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	70.4 % RPM	150
05	60050	3200	70.4 % RPM	150
05	200000	10580	70.4 % RPM	250

Flight Profiles for a Transient C-22
Used Boeing 727, INM 24

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	11895 LBS	0
03	6863	0	11895 LBS	157
03	15215	1000	11895 LBS	157
03	36663	2613	10712 LBS	210
03	55648	3801	10712 LBS	250
03	200000	14608	10712 LBS	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	4490 LBS	142
05	60050	3200	4490 LBS	142
05	75313	4000	4490 LBS	250
05	200000	10580	4490 LBS	250

Flight Profiles for a Transient C-23 (Sherpa)
Used INM 73

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	2341	0	100 % RPM	115
03	7500	528	100 % RPM	115
03	32910	5000	100 % RPM	160
03	200000	34408	100 % RPM	200

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	110
05	18076	1000	30 % RPM	110
05	113471	6000	30 % RPM	145
05	200000	10580	30 % RPM	180

Flight Profiles for a Transient C-130 (Hercules)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	977 C TIT	0
03	4800	0	977 C TIT	105
03	13500	300	977 C TIT	130
03	38190	2820	932 C TIT	170
03	108562	8588	932 C TIT	170
03	200000	8588	932 C TIT	170

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	932 C TIT	110
05	15178	845	932 C TIT	110
05	47201	2524	932 C TIT	150
05	200000	10532	932 C TIT	170

Flight Profiles for a Transient C-130A (Hercules)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	977 C TIT	0
03	4800	0	977 C TIT	105
03	13500	300	977 C TIT	130
03	38190	2820	932 C TIT	170
03	108562	8588	932 C TIT	170
03	200000	8588	932 C TIT	170

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	932 C TIT	110
05	15178	845	932 C TIT	110
05	47201	2524	932 C TIT	150
05	200000	10532	932 C TIT	170

Flight Profiles for a Transient C-130H (Hercules)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	977 C TIT	0
03	4800	0	977 C TIT	105
03	13500	300	977 C TIT	130
03	21115	1077	932 C TIT	170
03	38190	2820	932 C TIT	170
03	108562	8588	932 C TIT	170
03	200000	8588	932 C TIT	170

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	932 C TIT	110
05	15178	845	932 C TIT	110
05	47201	2524	932 C TIT	150
05	200000	10532	932 C TIT	170

Flight Profiles for a Transient C-131 (Samaritan)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	62 IN HG	0
03	2500	0	62 IN HG	120
03	12000	760	60 IN HG	140
03	25125	1810	45 IN HG	140
03	72958	1810	45 IN HG	140
03	87833	3000	45 IN HG	140
03	125333	6000	45 IN HG	140
03	200000	6000	45 IN HG	140

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	27 IN HG	120
05	30400	1643	27 IN HG	120
05	200000	10532	45 IN HG	140

Flight Profiles for a Transient C-135A (Stratolifter)
The loudness of the C-135A makes it a potentially important contributor to the DNL even if it is only a 1/mo transient.

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
02	0	0	96 % RPM	0
02	6400	0	96 % RPM	150
02	13500	600	96 % RPM	160
03	29500	1872	93 % RPM	250
03	164520	8588	93 % RPM	250
03	200000	12000	93 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	90 % RPM	156
05	76500	4059	90 % RPM	156
05	200000	10532	90 % RPM	170

Flight Profiles for a Transient C-135B (Stratolifter)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	1.8 EPR	0
03	4000	0	1.8 EPR	120
03	11000	400	1.8 EPR	140
03	13400	600	1.8 EPR	170
03	17300	2000	1.8 EPR	170
04	22000	2200	1.4 EPR	250
04	200000	18000	1.4 EPR	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	1.4 EPR	130
05	38000	2000	1.4 EPR	130
05	200000	10532	1.2 EPR	250

Flight Profiles for a Transient KC-135R (Stratolifter)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
11	0	0	89.6 % N1	0
11	8000	0	89.6 % N1	160
11	10000	200	89.6 % N1	160
11	18000	1000	89.6 % N1	200
11	26000	1000	89.6 % N1	250
11	80000	6400	89.6 % N1	250
06	150000	13000	82 % N1	300
06	200000	13000	82 % N1	300

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	66.5 % N1	160
05	30400	1643	66.5 % N1	160
05	200000	10532	66.5 % N1	250

Flight Profiles for a Transient C-137 (Air Force 1)
Used Boeing 707, INM 10 data

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	14850 LBS	0
03	4424	0	14850 LBS	156
03	10511	1000	14850 LBS	156
03	26593	2733	13120 LBS	206
03	52220	5500	13120 LBS	250
03	200000	21616	13120 LBS	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	3585 LBS	124
05	60050	3200	3585 LBS	124
05	200000	10580	3560 LBS	250

Flight Profiles for a Transient C-140 (Jetstar)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	3500	0	100 % RPM	170
03	11100	870	100 % RPM	210
03	18000	1400	89 % RPM	250
03	29100	2190	89 % RPM	250
04	35076	2610	89 % RPM	250
04	114300	8000	89 % RPM	250
04	200000	8000	89 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	80 % RPM	115
05	30400	1643	80 % RPM	120
05	49800	2660	85 % RPM	250
05	200000	10532	85 % RPM	250

Flight Profiles for a Transient C-141 (Starlifter)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	96 % RPM	0
03	5000	0	96 % RPM	115
03	13500	600	96 % RPM	250
04	97368	8588	85 % RPM	300
04	200000	15000	85 % RPM	300

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	68 % RPM	125
05	24669	1343	68 % RPM	125
05	32700	2000	70 % RPM	170
04	200000	10532	85 % RPM	200

Flight Profiles for a Transient E-3A (Sentry, AWACS)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	2.01 EPR	0
03	7100	0	2.01 EPR	160
03	7842	150	2.01 EPR	165
03	25100	1690	1.8 EPR	250
03	108000	8000	1.8 EPR	250
03	200000	15000	1.8 EPR	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	1.25 EPR	135
05	30400	1643	1.25 EPR	135
05	49801	2660	1.25 EPR	145
13	200000	10532	1.12 EPR	250

Flight Profiles for a Transient E-4 (NEACP)
Used Boeing 747, INM 02 data

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	34530 LBS	0
03	8546	0	34530 LBS	175
03	17618	1000	34530 LBS	175
06	30191	1820	23954 LBS	201
06	65877	2760	23954 LBS	250
06	233022	10000	23954 LBS	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	8340 LBS	151
05	60050	3200	8340 LBS	151
05	200000	10580	8240 LBS	250

Flight Profiles for a Transient F-4 (Phantom 2)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	100 % RPM	0
01	4000	0	100 % RPM	180
01	10000	200	100 % RPM	300
03	22000	600	98 % RPM	300
03	28000	1200	98 % RPM	310
03	34000	1600	98 % RPM	310
03	40000	2100	98 % RPM	330
03	46000	2500	98 % RPM	350
03	52000	3000	98 % RPM	350
03	300000	11000	85 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	175
05	6000	300	82 % RPM	175
05	30000	1500	82 % RPM	175
05	60000	3000	82 % RPM	180
05	300000	11000	85 % RPM	250

Flight Profiles for a Transient F-5A&B (Freedom Fighter)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	101 % RPM	0
01	2400	0	101 % RPM	150
01	10100	500	101 % RPM	280
03	12600	700	101 % RPM	350
03	27340	2300	101 % RPM	350
03	57680	5650	95 % RPM	350
03	200000	10000	90 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	165
05	26360	1431	82 % RPM	165
05	41560	2228	82 % RPM	180
04	200000	10532	85 % RPM	180

Flight Profiles for a Transient F-5E (Tiger 2)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	101 % RPM	0
01	2400	0	101 % RPM	150
01	10100	500	101 % RPM	280
03	12600	700	101 % RPM	350
03	27340	2300	101 % RPM	350
03	57680	5650	95 % RPM	350
03	200000	10000	90 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	165
05	26360	1431	82 % RPM	165
05	41560	2228	82 % RPM	180
04	200000	10532	85 % RPM	180

Flight Profiles for a Transient F-8 (Crusader)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	95 % RPM	0
01	3500	0	95 % RPM	140
01	9300	200	95 % RPM	160
01	12300	221	95 % RPM	180
01	27300	571	95 % RPM	250
03	28800	641	95 % RPM	250
03	100000	4000	90 % RPM	300
03	200000	12000	90 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	87 % RPM	140
05	26360	1430	87 % RPM	180
05	200000	10532	89 % RPM	200

Flight Profiles for a Transient F-14 (Tomcat)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	100 % RPM	0
01	3000	0	100 % RPM	165
01	11100	1000	100 % RPM	245
03	20000	2000	95 % RPM	300
03	72000	8000	90 % RPM	350
04	200000	15000	85 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	81 % RPM	140
05	30400	1643	81 % RPM	140
05	200000	10532	85 % RPM	250

Flight Profiles for a Transient F-15 (Eagle)
Without afterburner

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	90 % RPM	0
03	3000	0	90 % RPM	150
03	10000	400	90 % RPM	275
03	17152	1800	85 % RPM	350
03	29304	3000	85 % RPM	350
03	41456	4000	85 % RPM	350
04	114368	10000	78 % RPM	350
04	200000	15000	78 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	70 % RPM	140
05	36317	1800	74 % RPM	140
05	55760	1800	76 % RPM	150
05	67912	2000	76 % RPM	150
05	200000	10532	76 % RPM	200

Flight Profiles for a Transient F-16 (Fighting Falcon)
Without afterburner

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	92.3 % RPM	0
03	3000	0	92.3 % RPM	135
03	13500	600	92.3 % RPM	280
03	15000	720	92.3 % RPM	300
03	52127	8513	89 % RPM	350
06	200000	15000	85 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	75 % RPM	140
05	5000	312	75 % RPM	140
05	33142	1787	75 % RPM	230
05	200000	10532	82 % RPM	250

Flight Profiles for a Transient F-18 (Hornet)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	101.5 % NC	0
01	4750	0	101.5 % NC	150
01	7000	415	101.5 % NC	250
03	8000	600	92.5 % NC	250
03	20000	2800	92.5 % NC	305
03	80000	11200	92.5 % NC	365
03	200000	11200	92.5 % NC	365

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	77.4 % NC	135
05	41000	2200	77.4 % NC	135
05	200000	10532	77.4 % NC	190

Flight Profiles for a Transient F-100 (Super Sabre)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	95 % RPM	0
01	5700	0	95 % RPM	180
01	12000	700	95 % RPM	220
01	15000	1000	95 % RPM	220
03	18000	1200	94.5 % RPM	270
03	30000	2000	94.5 % RPM	300
03	40000	2500	94.5 % RPM	300
03	48000	3400	94.5 % RPM	350
03	200000	12000	94.5 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	85 % RPM	150
05	18000	993	85 % RPM	150
05	200000	10532	87 % RPM	190

Flight Profiles for a Transient F-106 (Delta Dart)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	108 % RPM	0
01	4500	0	108 % RPM	160
01	9000	400	108 % RPM	220
01	15000	900	108 % RPM	300
03	20000	1700	95 % RPM	350
03	25000	2400	95 % RPM	350
03	30000	3200	95 % RPM	350
03	40000	4900	95 % RPM	350
03	300000	15000	95 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	90 % RPM	185
05	4500	150	90 % RPM	185
05	6000	300	90 % RPM	185
05	30000	1500	90 % RPM	185
05	60000	1800	90 % RPM	185
06	300000	11000	83 % RPM	250

Flight Profiles for a Transient F-111A

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	97 % RPM	0
01	4000	0	97 % RPM	160
01	13500	750	97 % RPM	250
03	34560	2000	95 % RPM	350
03	37500	3000	95 % RPM	350
03	83437	5000	95 % RPM	350
03	200000	15000	90 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	145
05	6000	364	82 % RPM	145
05	19200	1056	82 % RPM	160
05	200000	10532	85 % RPM	180

Flight Profiles for a Transient F-111D

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	97 % RPM	0
01	4000	0	97 % RPM	160
01	13500	750	97 % RPM	250
03	34560	2000	95 % RPM	350
03	37500	3000	95 % RPM	350
03	83437	5000	95 % RPM	350
03	200000	15000	90 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	145
05	6000	364	82 % RPM	145
05	19200	1056	82 % RPM	160
05	200000	10532	85 % RPM	180

Flight Profiles for a Transient F-111F

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	97 % RPM	0
01	4000	0	97 % RPM	160
01	13500	750	97 % RPM	250
03	34560	2000	95 % RPM	350
03	37500	3000	95 % RPM	350
03	83437	5000	95 % RPM	350
03	200000	15000	90 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	82 % RPM	145
05	6000	364	82 % RPM	145
05	19200	1056	82 % RPM	160
05	200000	10532	85 % RPM	180

Flight Profiles for a Transient P-3 (Orion)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	3875 ESHP	0
03	4000	0	3875 ESHP	115
03	16000	1000	3200 ESHP	190
03	23700	2000	3200 ESHP	190
03	200000	10000	2000 ESHP	190

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	660 ESHP	125
05	1000	102	660 ESHP	125
05	17000	940	1060 ESHP	125
05	18000	990	1060 ESHP	140
05	200000	10532	1860 ESHP	170

Flight Profiles for a Transient TR-1
F105 engines without afterburner

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	1300	0	100 % RPM	85
03	14300	3000	100 % RPM	175
03	100000	23000	90 % RPM	250
03	200000	40000	90 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	90 % RPM	100
05	36930	2000	90 % RPM	125
06	200000	10532	90 % RPM	250

Flight Profiles for a Transient SR-71 (Blackbird)
The loudness of this aircraft makes it an important contributor to the DNL even if it is only a 1/mo transient.

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	100 % RPM	0
01	6000	0	100 % RPM	200
01	15000	2115	100 % RPM	300
03	30000	5000	70 % RPM	350
03	200000	25000	70 % RPM	450

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	200
05	200000	10532	30 % RPM	200

Flight Profiles for a Transient S-3A

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	2600	0	100 % RPM	120
03	9500	1000	90 % RPM	190
03	18240	2000	90 % RPM	220
03	30400	4000	90 % RPM	220
03	200000	10000	90 % RPM	220

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	56.8 % RPM	110
05	200000	10532	56.8 % RPM	110

Flight Profiles for a Transient T-2C (Buckeye)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	101.7 % RPM	0
03	2000	0	101.7 % RPM	180
03	8000	450	101.7 % RPM	180
03	11300	1000	101.7 % RPM	180
03	41300	6000	101.7 % RPM	220
03	141300	22660	101.7 % RPM	300
03	200000	30000	101.7 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	72.5 % RPM	140
05	30400	1643	72.5 % RPM	140
04	200000	10532	75 % RPM	180

Flight Profiles for a Transient T-29

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	62 IN HG	0
03	2500	0	62 IN HG	120
03	12000	760	60 IN HG	140
03	25125	1810	45 IN HG	140
03	72958	1810	45 IN HG	140
03	87833	3000	45 IN HG	140
03	125333	6000	45 IN HG	140
03	200000	6000	45 IN HG	140

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	27 IN HG	120
05	30400	1643	45 IN HG	140
05	200000	10532	45 IN HG	140

Flight Profiles for a Transient T-33 (Shooting Star)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	3000	0	100 % RPM	120
03	5500	50	100 % RPM	135
03	16000	1000	100 % RPM	220
03	100000	10000	85 % RPM	254
03	200000	12000	85 % RPM	254

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	81 % RPM	125
05	33142	1787	81 % RPM	140
05	124669	6584	85 % RPM	180
04	200000	10532	90 % RPM	200

Flight Profiles for a Transient T-34 (Turbo Mentor)
Used Beech BE45, INM 75

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	1850	0	100 % RPM	77
03	7500	528	100 % RPM	110
03	200000	19393	100 % RPM	220

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	65
05	3000	150	30 % RPM	86
05	19000	300	30 % RPM	101
05	38000	600	30 % RPM	121
05	200000	10532	30 % RPM	200

Flight Profiles for a Transient T-37 (Tweet)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	5500	0	100 % RPM	90
03	29500	4000	90 % RPM	180
03	38900	4500	90 % RPM	200
03	122900	8000	90 % RPM	250
03	200000	8000	90 % RPM	300

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	80 % RPM	110
05	30400	1643	80 % RPM	110
05	200000	10532	90 % RPM	200

Flight Profiles for a Transient T-38 (Talon)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
01	0	0	100 % RPM	0
01	2000	0	100 % RPM	175
03	13500	1000	95 % RPM	250
03	48500	8540	95 % RPM	350
03	200000	12000	95 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	88 % RPM	160
05	33142	1787	88 % RPM	160
05	88184	4672	88 % RPM	200
04	200000	10532	90 % RPM	250

Flight Profiles for a Transient T-39 (Sabreliner)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	96 % RPM	0
03	2950	0	96 % RPM	120
03	13500	900	92 % RPM	250
03	79855	8570	92 % RPM	350
03	200000	12000	92 % RPM	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	72 % RPM	120
05	33142	1787	72 % RPM	120
05	88184	4672	75 % RPM	160
05	200000	10532	82 % RPM	250

Flight Profiles for a Transient T-41 (Mescalero)
Used Cessna 172, INM 75 data

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	1850	0	100 % RPM	77
03	7500	528	100 % RPM	160
03	200000	19393	100 % RPM	220

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	65
05	36930	2000	30 % RPM	125
05	200000	10580	30 % RPM	200

Flight Profiles for a Transient T-42 (Cochise)
Used Beech Baron, INM 76

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	1948	0	100 % RPM	110
03	13942	1197	100 % RPM	150
03	200000	18676	100 % RPM	180

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	90
05	60050	3200	30 % RPM	90
05	200000	10580	31 % RPM	120

Flight Profiles for a Transient T-43

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	1.98 EPR	0
03	6000	0	1.98 EPR	120
03	11300	200	1.9 EPR	150
03	16300	1300	1.9 EPR	180
03	31300	2700	1.8 EPR	220
03	400000	32890	1.8 EPR	350

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	1.2 EPR	115
05	20000	1098	1.2 EPR	115
05	200000	10532	1.4 EPR	150

Flight Profiles for a Transient T-44
Used Beech King Air 90, INM 73

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	2341	0	100 % RPM	115
03	7500	528	100 % RPM	150
03	61319	10000	100 % RPM	200
03	200000	34408	100 % RPM	275

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	110
05	36930	2000	30 % RPM	125
05	200000	10580	30 % RPM	200

Flight Profiles for a Transient T-45 (Goshawk)
Used Cessna business jet, INM 57

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	1554 LBS	0
03	3025	0	1554 LBS	125
03	12139	1212	1554 LBS	135
03	22212	1948	1554 LBS	190
03	40975	3649	1554 LBS	250
03	200000	20825	1554 LBS	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	305 LBS	115
05	60050	3200	305 LBS	115
05	200000	10580	305 LBS	250

Flight Profiles for a Transient U-2

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	1300	0	100 % RPM	85
03	14300	3000	100 % RPM	175
03	100000	23000	90 % RPM	250
03	200000	40000	90 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	90 % RPM	100
05	36930	2000	90 % RPM	125
06	200000	10532	90 % RPM	250

Flight Profiles for a Transient U-6
Used DeHaviland Beaver, INM 75

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	1850	0	100 % RPM	77
03	7500	528	100 % RPM	125
03	200000	19393	100 % RPM	200

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	65
05	36930	2000	30 % RPM	125
05	200000	10580	30 % RPM	200

Flight Profiles for a Transient U-21 (Ute)
Used C-12

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	2662	0	100 % RPM	115
03	10000	644	100 % RPM	250
03	100000	8547	90 % RPM	250
03	200000	10000	90 % RPM	250

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	30 % RPM	150
05	6000	300	30 % RPM	150
05	30000	2000	30 % RPM	200
05	60000	3000	50 % RPM	250
05	200000	10000	50 % RPM	250

Flight Profiles for a Transient OV-10 (Bronco)

Departure

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
03	0	0	100 % RPM	0
03	2000	0	100 % RPM	105
03	13500	1000	100 % RPM	130
03	24000	2000	97 % RPM	150
03	108000	10000	97 % RPM	200
03	200000	10000	97 % RPM	200

Arrival

POWER #	DISTANCE (FT)	ALTITUDE (FT AGL)	POWER SETTING	AIRSPEED (KTS)
05	0	50	97 % RPM	100
05	45000	2408	97 % RPM	100
05	200000	10532	97 % RPM	135

REFERENCES

1. AIR FORCE PROCEDURE FOR PREDICTING AIRCRAFT NOISE AROUND AIRBASES: Noise Exposure Model (NOISEMAP) User's Manual AAMRL-TR-90-011

2. AIR FORCE PROCEDURE FOR PREDICTING AIRCRAFT NOISE AROUND AIRBASES: Airbase Operations Program (BASEOPS) Description AAMRL-TR-90-012

3. BASEOPS DEFAULT PROFILES FOR CIVIL AIRCRAFT AAMRL-TR-90-009

*U.S.Government Printing Office 1990 748-002/20203